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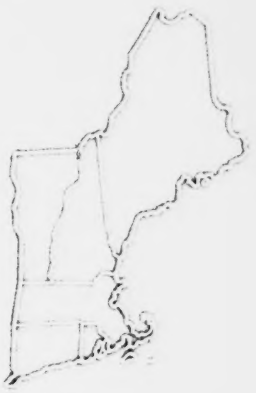
New England



August
1957

Published monthly by the FEDERAL RESERVE BANK of BOSTON

Industrial Fuel Costs in New England
PART I—PAST AND PRESENT

New England has no commercial deposits of industrial fuel within its borders. The region imports most of its residual oil from abroad, brings its bituminous coal from Pennsylvania and West Virginia, and pipes its natural gas from southern states. As a result, fuel costs for large industries and electric utilities are higher in New England than in any other region in the United States and about 50 per cent higher than in the country as a whole.

Although most New England enterprises do not require large quantities of fuel for industrial processing, fuel costs comprise an important fraction of total costs in some of the region's basic manufacturing industries such as pulp and paper, textiles and chemicals. Furthermore, the electric utility industries require huge quantities of fuel and their costs must be reflected in electric rates. Thus, all consumers of electric power – residential and commercial as well as industrial users – are affected by industrial fuel costs.

Fortunately, most utilities and industrial firms are able to moderate their high fuel costs by carefully choosing locations for new plants, by installing equipment

(Continued on page 2)

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capable of burning the lowest cost fuel available, and by farsighted purchasing programs which enable them to benefit from their particular location and the scale of their operations.

Plant Location

The industrial fuel cost map on the following page demonstrates how fuel costs vary by location within New England. It shows that, as of June 15, 1957, inland purchasers paid from 52 cents to 72 cents per million British Thermal Units for residual oil and from 42 cents to 58 cents per million B.T.U.'s for high quality, low volatile, bituminous coal.

The map shows that the all-rail transportation charge for hauling coal from Pennsylvania and northern West Virginia does not vary much by location within New England. An extra 100 miles on the long haul does not affect railroad rates nearly as much as does an extra 100 miles on a shorter haul of dock coals in the state of Maine. The map also shows how New England benefits from its many ports which provide entry for residual oil.

Firms located at tidewater docks do considerably better than the figures on the map indicate because they can unload fuel directly into storage facilities from colliers, tankers, and barges. In addition, cargo buyers of residual oil sometimes have the advantage of being accessible to more sellers than are inland purchasers. On the other hand, companies buying at tidewater have the disadvantage of having to bear the expense of owning or leasing dock facilities.

Fuels and Equipment

During World War II imports of foreign oil were halted and most steam plants in New England were required to use coal as a fuel. After the war, large quantities of residual oil became available and the price plummeted. In the 1948-1953 period residual oil was the lowest cost fuel available in most parts of New England and many electric utilities, industrial firms and large institutions installed oil burning equipment in new plants and converted or reconverted their existing plants.

Since 1954 oil has not maintained its price advantage and coal distributors have recouped some of their losses. Residual oil prices moved up gradually between December 1954 and June 1956. During the Suez crisis they jumped almost 20 per cent. Prices receded in the spring of 1957, but as of June 15, 1957 coal was the cheaper fuel on a cost per heat unit basis throughout most of the New England states.

In recent years a third competitor—natural gas—has entered the industrial fuel market. It is currently being used by a number of utilities and industrial plants in southern New England. It has also partly supplanted manufactured gas for residential use. However, it is sold to industries and utilities only if they are close to the main pipelines and it is generally not available at a competitive cost during cold weather when the residential heating demand is large.

Thus, natural gas can be used to advantage by utilities as a supplementary fuel, by industries which have a peak summer demand, such as the brewing industry, and by industries which can pay a premium for natural gas for special technical reasons. It is unlikely, however, that natural gas will ever become an important year-round competitor because the quantity of gas which can be piped into New England is very small compared to the total industrial demand.

The choice of equipment to install in a steam plant is an important decision for any large fuel user. In New England the constant price fluctuations make it unusually difficult to decide whether to install coal, oil or gas burning equipment. Present price differentials may not be a useful guide to the future. If the price structure changes, new equipment can lose its competitive advantage overnight.

The problem can be met by installing equipment capable of burning, storing, and handling two types of fuel. However, this involves a sizable additional capital expense. It is not a good decision if the odds are decidedly against one fuel becoming cheaper than another. In addition, it is not economically feasible to construct small plants so that they can be converted from one fuel to another.

Comparing Fuel Costs

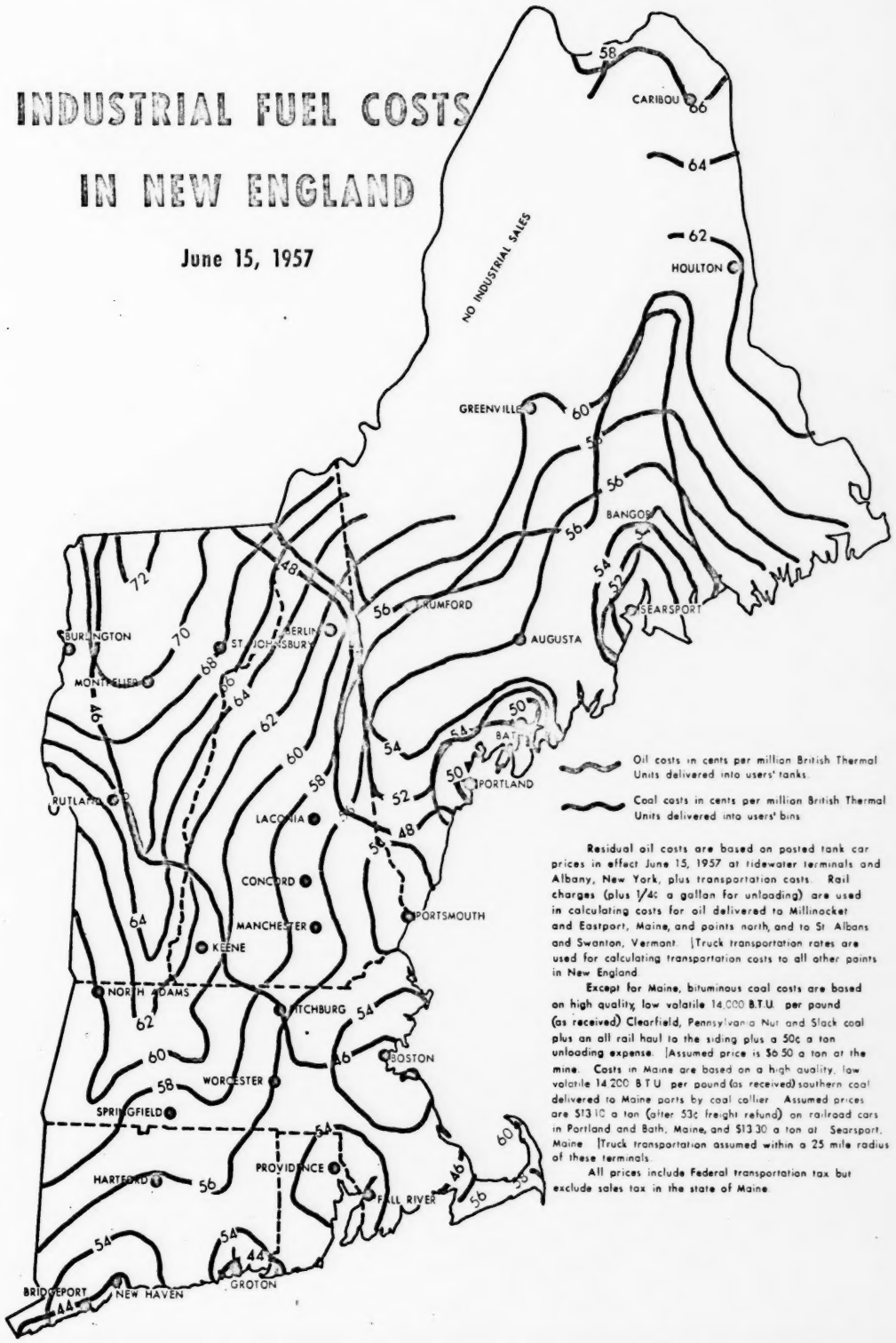
It should be emphasized, therefore, that the fuel cost map only illustrates costs on June 15, 1957. If this picture had been taken on July 15, 1957, oil would have been one cent per million B.T.U.'s cheaper, but if it had been taken in March 15, 1957, coal would have looked much better. One year before on June 15, 1956 residual oil would have been competitive over a much wider area.

Moreover, even if a plant has the equipment to burn both coal and oil, the type of cost comparison shown on the cost map is not an entirely reliable guide for several reasons:

(1) Although the map sheds light on the competitive position of residual fuel oil and bituminous coal in various sections of New England, it does not show minimum prices. The cost figures recently obtained by the Federal

INDUSTRIAL FUEL COSTS IN NEW ENGLAND

June 15, 1957



Residual oil costs are based on posted tank car prices in effect June 15, 1957 at tidewater terminals and Albany, New York, plus transportation costs. Rail charges (plus 1/4c a gallon for unloading) are used in calculating costs for oil delivered to Millinocket and Eastport, Maine, and points north, and to St Albans and Swanton, Vermont. [Truck transportation rates are used for calculating transportation costs to all other points in New England.

Except for Maine, bituminous coal costs are based on high quality, low volatile 14,000 B.T.U. per pound (as received) Clearfield, Pennsylvania Nut and Stack coal plus an all rail haul to the siding plus a 50c a ton unloading expense. [Assumed price is $6.50 a ton at the mine. Costs in Maine are based on a high quality, low volatile 14,200 B.T.U. per pound (as received) southern coal delivered to Maine ports by coal collier. Assumed prices are $13.10 a ton (after 53c freight refund) on railroad cars in Portland and Bath, Maine, and $13.30 a ton at Searsport, Maine. [Truck transportation assumed within a 25 mile radius of these terminals.

All prices include Federal transportation tax but exclude sales tax in the state of Maine.

Reserve Bank of Boston from 120 industrial and government purchasing agents buying industrial fuel for about 400 plants and institutions scattered throughout New England show that almost all large purchasers of coal or oil obtain somewhat lower prices. In areas where there is aggressive competition, smaller purchasers also benefit from discounts. During this last year, when residual oil was in short supply, these discounts usually did not exceed four per cent, but in a few cases where long term contracts existed, they were substantially more. Large coal buyers obtained similar price reductions.

(2) Many plants, institutions and large buildings are not located on railroad sidings. In these cases, coal must be unloaded at a nearby station and trucked to the steam plant. Residual oil does not require this expensive extra handling because tank trucks are used for hauling to most parts of New England.

(3) If a plant has the proper equipment it can burn a less expensive coal than the coal used for price estimation on the cost map. For example, a top-quality, high-volatile coal can often be purchased for about three cents per million B.T.U.'s less than high-quality, low-volatile coal. Similarly, strip mine coal can be purchased at even less cost and is therefore a better buy—*provided* the savings justify putting in the additional equipment investment which is required when strip coal is used.

(4) In small steam plants or in plants where cleanliness is considered a very important factor, oil is generally preferred even when coal is less expensive on a B.T.U. basis. In these instances, operating and handling costs are considered more important than savings in fuel. Modern coal burning equipment can be entirely automatic and practically dirt free. However, the capital investment is considerably more for the small (50-500 H.P.) coal boilers than it is for automatic oil equipment.

(5) Required fuel inventories are very much larger for all-rail coals than for coal shipped from tidewater docks or for residual oil. Larger inventories are required because all-rail shipments tend to become bunched and delivery dates—especially in winter—cannot be predicted with accuracy. In addition, all-rail coal is likely to become frozen in transit. This creates a very difficult unloading problem and increases costs. There is the further problem of finding enough storage space to keep these large inventories.

For these reasons, most large purchasers in Maine and in metropolitan areas located at tidewater in the other five New England states use southern dock coals or residual oil even though it is more expensive than all-rail coal on a B.T.U. basis.

(6) The presence of vanadium and sulphur in present-day residual oil creates costly corrosion problems in modern high-pressure, high-temperature boilers. For this reason a few power plant engineers prefer coal over oil at the same cost. On the other hand, a majority of the large fuel purchasers have at least a slight preference for oil because of its ease of handling and storing. Many weight this preference up to two cents per million B.T.U.'s for oil (delivered into tanks) over coal (F.O.B. cars plus 50 cents a ton for unloading). Plant engineers with difficult unloading or storage problems place a much greater value on oil.

Purchasing Programs

Even though the major factors affecting fuel costs are location and fuel-burning equipment, a well-planned purchasing program can do much to lower costs.

The purchasing agent will make sure that the fuel quality specified in his contract is actually provided. He will also make sure that all reliable sellers have an opportunity to bid for his company's business. This is particularly important in the fuel market where published prices are generally reduced, at least slightly, for quantity purchases. For example, even though the market for residual oil has been weak in recent months, most New England distributors increased their markups 5 cents a barrel. These events have encouraged many buyers to do more bargaining with their suppliers.

Most important, perhaps, in plants capable of burning several types of fuel, the purchasing agent works with the plant engineers in determining what type of fuel to burn. In this way, the company is protected from paying too much for its fuel in an era when competing fuels are fluctuating widely in price.

Conclusion

The information presented above provides no simple answers as to exactly what fuel costs should be expected for a particular plant at a particular location. However, it has shown that prices fluctuate from month to month, and that combustion technology is also changing with the times. Therefore, past decisions must be continually reviewed in the light of present conditions as well as future probabilities.

A subsequent issue of the *New England Business Review* will discuss the probable trend of prices of industrial fuel in New England.

Ocean Steamship Service and New England

Last month's *Business Review* discussed the progress and some of the current problems of the port of Boston. This article reviews the situation of the other principal New England seaports. The basis for both articles is a report by the New England Governors' Committee on Public Transportation, *Water Transportation Policy for New England* (Report No. 8, May 1957). Copies may be had from the Committee's Executive Director, 1137 Statler Office Building, Boston 16, Mass.

The advantages possessed by a seaport enjoying regular ocean shipping service are perhaps most keenly appreciated by those seaports which do not enjoy such service. The activity of the Great Lakes ports (with the St. Lawrence Seaway nearing completion) makes it clear that establishment of shipping service is a prestige factor of immense importance. In proper circumstances, such service provides low-cost transport to shippers and receivers in the local area. And it may well enhance the area's attraction as an industrial site.

Many New England coastal cities have as much reason to campaign for shipping service as have the Great Lakes cities. Well over a dozen such New England centers possess good deep-water harbors, good land connections by rail and by road, and a tradition of maritime history dating back to sailing-ship days. Each can point to traffic with a local origin or destination which now travels overland for distances which would be quite unnecessary if the local port were used.

Yet the facts are these: only Boston and Portland now offer regular general-cargo shipping service; and service via Portland is at present limited to a few foreign areas. In some years, Searsport handles large general-cargo tonnages, but they are usually confined to a few items such as potatoes and newsprint, and the service is irregular. One or two other ports still receive occasional calls from ships in intercoastal or foreign trade service. But they are too infrequent or uncertain to form a regular transportation service.

Competitive Attraction of the Largest Ports

This condition is not peculiar to New England. In all areas, there has been an increasing tendency for the flow of traffic to concentrate upon the largest ports, to the detriment of smaller and medium-sized points. One reason for the competitive strength of the very large ports was noted in last month's article reviewing the situation of the port of Boston. The larger the port (measured by its general cargo tonnage), the more regular and frequent the shipping service it can offer, and the better equipped it is to furnish the many incidental services involved in ocean shipments. The traffic flows to those points at which the ships and service are available, and the ships and service congregate at the points to which the traffic comes.

The Requirements for Shipping Service

The reply of many a smaller city would be that there are competitive liabilities to offset the assets of these large ports. Any city which knows that its local area generates a fair volume of water-going traffic can point first to the saving in land transport cost that would accrue if the business were handled through the local port, and second to at least some degree of dissatisfaction with respect to existing transport channels, e.g., complaints with respect to careless handling, pilferage, and mislaid goods. Consequently, it may seem that the task of establishing service is just a matter of overcoming inertia —of persuading shipping companies to begin service, and business firms to support it.

Undoubtedly, aggressive salesmanship is a necessary ingredient for a port's development. Yet the real requirements may be more complex. The shipping company and the shipper himself (or the receiver, if he happens to assume responsibility for transport) are by no means the only people involved in the process of transporting goods, but they are the most important. The real task is to evaluate the true needs of these two, to learn if there is sufficient harmony between these needs to insure that any service once started can be maintained.

The harsh fact is that estimates of potential tonnage which might be shipped through the port are almost meaningless until such questions as these have been answered: Where is the export tonnage going? Is it concentrated with respect to destination, or are destinations so scattered that the tonnage for any one is small? Is there sufficient concentration to make the business attractive to any particular shipping line? As to this tonnage, how steady and regular in shipment is it? What are its demands with respect to frequency of service? What about financing, foreign exchange, export service? As to imports, what demands for processing and special service do they make upon arrival?

However much interest a local firm may express in the establishment of service, it may not in reality be attracted to such service as a local port could offer. In many instances, speed of

delivery is a factor of such primary importance as to outweigh extra costs of land transport to a more distant port and even careless handling —provided such handling has not gone so far beyond the nuisance or talking-point stage as to become a serious problem. If a shipper requires the frequency and variety of service which only a port like New York can supply, he may be able to contribute only a small fraction of his tonnage to the local port.

Of equal importance are special needs of the steamship companies. The pressure of cost increases makes especially strong their desire to see cargo accumulate in large quantities at a minimum number of ports. The shipper may dislike the long overland haul necessary to send his cargo to a major port, but the steamship company dislikes equally the long overwater trip its vessel must make from a major port to a local one. With respect to cargo which might be concentrated for pickup or delivery at a single port, time spent in sailing between two or more North Atlantic ports is time and money wasted, from the point of view of a steamship company. If a port is to expect regular service, it must be capable of supplying comparatively large quantities of cargo for specific destinations.

It is doubtful if any New England port could generate tonnage in the needed volume from its own local area. The large North Atlantic ports all appear to supplement their own hinterland tonnage with business from other areas, particularly the Midwest. Difficulty in obtaining an adequate share of this Midwest business has been a continuing source of trouble for Boston. Portland is situated in an area which makes comparatively little use of water transportation. Consequently, the port must rely heavily on its rail connections for business, particularly the Grand Trunk line to Canada.

Southern Connecticut appears to be the New England area generating export-import traffic in the largest variety and volume. Whether this tonnage would be sufficient of itself to maintain a port is extremely doubtful. Moreover, this is precisely the area which would experience greatest difficulty in meeting competition from New York. One shipping line began general cargo service via New Haven in 1954, the result of spirited efforts within that city. But difficulties arose, and the service was discontinued.

GROSS TONNAGE HANDLED BY NEW ENGLAND PORTS, 1945-1955
(In thousands of tons)

Port	1945	1950	1955
Penobscot River, Me.	286	784	939
Searsport, Me.	409	776	946
Portland, Me.	4,849	7,825	14,218
Portsmouth, N. H.	231	779	1,206
Salem, Mass.	385	956	1,124
Boston, Mass.	12,850	19,447	19,052
Fall River, Mass.	1,070	1,668	2,013
Providence, R. I.	3,749	7,802	7,697
New London, Conn.	299	684	1,177
Thames River, Conn.	411	719	975
Connecticut River, Conn.	1,116	1,982	2,505
New Haven, Conn.	3,450	5,297	7,435
Housatonic River, Conn.	442	451	696
Bridgeport, Conn.	2,003	2,265	2,633
Stamford, Conn.	453	633	826

Source: Annual Reports, U. S. Army Corps of Engineers

The Function of the New England Ports

General cargo service is the only form of water transport of interest to most shippers and receivers. But general cargo items constitute only a minority of the total tonnage handled, even at the major ports. The fact that most New England ports handle no general cargo does not mean that they are unsuccessful. On the contrary, many have experienced vast increases in tonnage since the close of World War II. The accompanying table lists the fifteen largest New England ports or port areas, in terms of tonnage currently handled. The smallest deals with about three-quarters of a million tons each year. Most of these ports have doubled their tonnage since 1945, and larger increases are frequent.

In all instances, crude petroleum or petroleum products and coal weigh heavily in the total tonnage figure. Such ports as Salem and the Housatonic River handle almost nothing else. With the exception of Portland and Boston, the list of commodities handled is usually a short one, mainly (in addition to oil and coal) bulk cargo items such as chemicals. With few exceptions, these are raw materials for local industry. The Maine ports handle pulpwood and paper. Providence and New Haven bring in large quantities of lumber from the West Coast and from British Columbia.

By comparison with general cargo, bulk cargo service attracts little attention. Yet when New England's ports serve as channels for receipts of vast quantities of fuel and raw materials at low waterborne cost, they perform a function of fundamental importance to the regional economy.

Coastal & Intercoastal Service

The importance to New England of waterborne general-cargo service, available at many points, would be much enhanced if it could be used for domestic as well as international service. The North Atlantic coastal waters were used for shipments between United States coastal cities long before the development of rail or road transport. Such traffic was often the largest element in the maritime commerce of New England ports. Coastal and intercoastal traffic, al-

though important in volume right up to 1940, was interrupted by the war years. In the postwar period, coastal general-cargo service has almost completely vanished, evidently outcompeted by rail and highway transport. Intercoastal service (between Atlantic and Pacific) continues, but it is no longer capable of the same degree of inland penetration. Both origin and destination must be close to the ports involved if intercoastal service is to be chosen in preference to land transport.

Bulk vs. General Cargo

In summary, most New England ports handle bulk commodities but not general cargo. There can be no question that their service as channels for receipt of vast quantities of fuel and raw materials is of fundamental importance. The precise contribution which might be made by the establishment of general cargo service is less clearly defined. Today, general cargo service means foreign trade service. For most United States firms, the export market is not an important outlet for domestic production—as witness the fact that total merchandise exports are less than five per cent of national product. There is no evidence that New England stands above the national average with respect to the significance of export markets. United States imports still tend heavily towards raw materials—in considerable part, just such bulk cargoes as the New England ports may now handle.

Undoubtedly direct general cargo shipping service would be an important competitive advantage in particular instances. But such cases may well be in a minority. General cargo service, direct contact with foreign countries, carries with it a strong suggestion of prestige. But prestige is a somewhat intangible asset. Ultimately, shipping service is important only insofar as it improves the competitive position of firms within the local area.

Innovations in Transportation

There may possibly be a swing of the pendulum against land transport, restoring to the ports some of their lost domestic general cargo business. But no such swing can occur without a substantial change in present cargo-handling methods. Innovations along these lines are already in prospect. But their precise form, particularly the extent to which they will affect the present distribution of business, are uncertain.

All innovations are likely to involve some economy in the use of labor. Labor costs (although by no means the only factor involved) were important in the decline of coastal shipping. Before World War II, shipping was a low-wage industry. Postwar full employment drove its operating costs up sharply. Much of manufacturing industry has adjusted to this increase in labor costs (resulting primarily from an increase in the demand for labor in all occupations) by greater mechanization or "automation." It is economizing on labor by using it in different and more effective ways, thus holding down the cost of labor per unit of product. The transportation industry's success with similar innovations has been difficult.

It seems probable that innovation will involve the use of some form of standard box container capable of being lifted by mechanical devices. But most shipments of freight are handled by more than one carrier or form of carriage. Any ocean-going shipment, for example, must move by some form of land carrier to and from the port, in addition to movement by vessel. Box containers owned by a transportation company must therefore pass out of its possession, if they are to move all the way from shipper to receiver. For example, freight cars are freely exchanged between railroads. But where a container must move between carriers of different modes, the problems grow more difficult. They are not only technological problems. Competition between different forms of carrier is intense. New developments involving cooperation between them have been slow to materialize.

The most-discussed innovation has been the "roll-on-roll-off" ship for transport of loaded semi-trailers. Of all innovations in prospect, this one seems most capable of working a revolution in transport. The port of Providence, in particular, has hopes of re-establishing coastal general-cargo service by this method, and has encouraged its development. Roll-on-roll-off service has been successfully instituted in service between Puerto Rico and the United States. But it has not yet been tried out in coastal service; and the prospects for North Atlantic service in particular are uncertain. A semi-trailer is simply a large wheeled box; in this sense, the roll-on-roll-off ship is a variant of the box-innovation idea. Perhaps boxes lifted by crane between flat car or flat-bed trailer and ship will be introduced.

Some such development is inevitable. The uncertainties are when, and in what form. Until then, it is not clear whether or not certain of New England's ports can play a larger role than they now do. Spectacular as these changes may be, the primary function of all ports will still be to serve as channels for the receipts of fuels and raw materials.

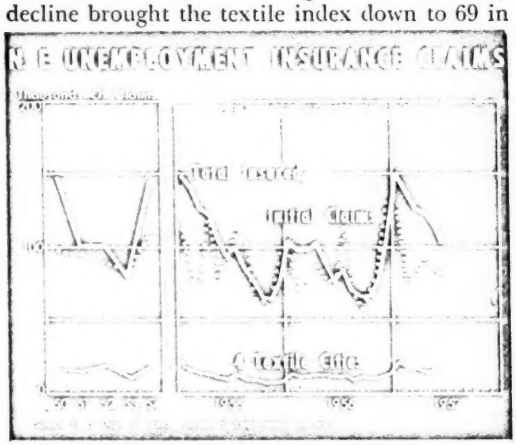
REVIEW OF THE SECOND QUARTER:

Which Way Business?

New England business activity moved along steadily during the spring months of 1957. Although the pace slackened, the momentum from two years of expansion is far from spent.

Total volume of output from the region's factories during the first five months was stable, even though less than during the comparable period of 1956. Nonfarm employment and department store sales continued close to year-ago figures. Construction activity picked up more than seasonally in April and May. Perhaps the most noticeable slackening was in demand for some consumer durable goods such as automobiles, appliances and furniture, as well as reduced order volume for some basic materials and producers' equipment. These declines contributed to more cautious inventory policies. Factory employment declined slightly and the average factory workweek shortened, but not enough to affect total employment or total personal income. Consumer, real estate, and business credit were still in strong demand, but expansion was generally slower than a year ago. Some of the reduced pressure for business loans from banks was replaced by greater resort to the capital market for long-term funds.

New England **manufacturing production**, in the aggregate and after adjustment for seasonal factors, changed very little in recent months. This bank's index held at 117 per cent of its 1950-52 base value during the first five months of the year, except for a slight dip in March. However, it reflected an earlier decline from the April 1956 peak value of 125. The recent trend was not uniform among industries. Steady decline brought the textile index down to 69 in May from 84 a year ago. Paper-products output declined rather sharply in April. Shoe- and leather-industry output was somewhat less than a year ago. Production of primary metals followed an irregular trend.



The volume of **new orders** received by manufacturers was not as buoyant as earlier in the boom period, and in some cases fell below the volume of shipments with a consequent decline in order backlogs. Manufacturers showed little desire to increase raw-material **inventories**, and merchants were likewise cautious about excess accumulation of stocks. There was little evidence of inventory expansion during the quarter except for automobile dealers, and much of the expansion which took place in book value was attributable to higher replacement costs.

The national consumer **price index** of 120.2 in June set a new record for the tenth consecutive month, and was 3.4 per cent above a year ago. Although food prices continued to rise seasonally, average wholesale commodity prices leveled off somewhat, and the index remained about 2.8 per cent above the year-earlier figure. Prices of some nonferrous metals and lumber products showed weakness.

Increases in nonmanufacturing activities continued to push New England's **nonagricultural employment** to new highs in the second quarter, despite drops in manufacturing payrolls. May nonmanufacturing employment, including construction, transportation, utility, trade, service, finance, and government establishments totaled 41,700 more than a year earlier. Manufacturing, over the same period, showed a 30,900 drop, including notable declines in textiles and metal-product industries.

Total insured unemployment declined in June for the fifth consecutive month, but remained 34 per cent above last year's level. Initial claims for unemployment benefits in May and early June declined.

Seasonal curtailments in some of the region's soft-goods industries and the cutting of overtime in metal-using and other industries resulted in further shortening of the average workweek for New England factory workers during April and May, although a relengthening was indicated in June. In many cases this reduction in the number of hours worked per week was sufficient to cause a decline in **average weekly earnings**,

even though average hourly earnings were usually at record heights. Anticipated wage-rate adjustments this summer, however, could easily revive the upward trend in average weekly earnings. The indexes for production man hours, in both durable and nondurable goods industries remained below year-ago levels.

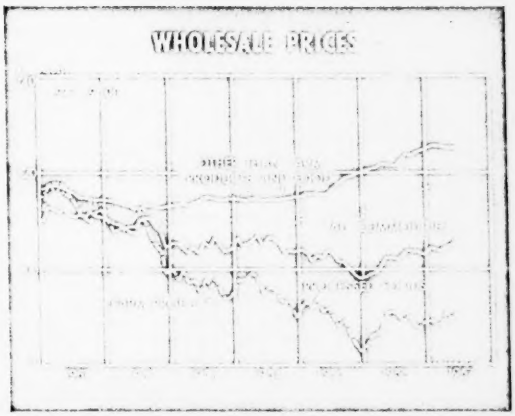
While incomes generally maintained their levels, **department store sales** during the first six months of 1957 were one per cent lower than a year ago. Sales in April were nine per cent larger than in April 1956, principally because the much later date of Easter Sunday gave three weeks of pre-Easter shopping to this April which the 1956 April lacked. May sales volume just about equalled that of a year ago. In June, due in part to there being one less shopping day this year than last, sales were 8 per cent less.

Sales of wearing apparel and accessories, both men's and women's, were strong in April, on account of the Easter date. They continued better than other departments on a year-to-year basis of comparison during May, but in June fell 7 per cent below year-earlier levels, perhaps because of much warmer than usual weather. Homefurnishing sales continued to lag behind sales of soft goods. Basement store sales during the second quarter were not as strong as those in the main store.

Cash and regular charge account sales continued to increase faster than those under instalment plans. Collection ratios showed improvement over year-ago levels. Accounts receivable at the end of June were two per cent less than a year earlier.

New car sales, as measured by state registration figures, lagged behind dealers' expectations again this spring, repeating last year's disappointment. Cumulative registrations for the first five months of the year in New England were about eight per cent behind the year-earlier total. Dealers appear to be less inclined to sacrifice profit margins to create sales volume than was the case in 1956. Purchasers continue to make extensive use of instalment credit.

Better vacation weather during May and June this year than last was an important factor in the five per cent gain in **lodging business** over year-ago levels. Registration activity for the summer months has been strong. Forty-three per cent of the reporting proprietors have more reservations for July and August, and 36 per cent have as many as a year ago. Only 21 per cent reported lower July and August reservations. September reservations are weak, with 60 per cent reporting the same level of reservations as a year ago, while only 15 per cent report more



bookings and one-fourth had fewer bookings.

Credit developments thus far in 1957 were shaped mainly by strong business demands for expansion and modernization of capital facilities. Sales of new corporate bonds and stocks reached a record. Expansion of business loan volume at commercial banks was substantially below the record limit of the first half of 1956 nationally, but about equal to the 1956 pace at New England banks.

Business needed funds mainly for financing the continuing capital goods boom. Dividend payments were up somewhat, while trade customers appeared to be slowing down on account payments. Inventory accumulation, however, required less funds than in 1956. The tightening liquid position of corporations is shown by the rise in borrowing from the country's commercial banks during March and June tax payment dates in 1957 as compared to 1956. This was so even though the schedule of tax payments called for ten per cent less of the total annual tax in the 1957 period than in the 1956 period.

With monetary restraint holding back expansion of bank credit, the heavy demand for existing funds forced up **interest rates.** The rise in money rates during the second quarter more than offset the decline in the first quarter and yields rose to the highest levels since 1933.

Competition for funds and the general rise in interest rates led to increased returns paid on **savings** accounts. On January 1, the maximum rate allowed on time deposits at insured commercial banks was raised from 2½ to 3 per cent. Although other savings institutions generally matched this rise, time deposits at commercial banks in the nation rose substantially more during the first half of the year than in the same period in other recent years. At the same time, savings growth at other institutions tended to lag behind last year's rate.

New England commercial banks have not been

as aggressively seeking savings as banks elsewhere and their time deposits have shown almost no growth. As savings at other institutions in New England have expanded less rapidly than last year, savers in this region may be placing funds into other investment channels.

New England **construction** contracts, reported by F. W. Dodge Corporation, for the second quarter exceeded those for the comparable period of 1956 by 5.5 per cent, after trailing 1956 performance by 27 per cent during the first quarter. The record volume of May contracts was followed by a more modest volume in June. Recent strength in regional construction has been most pronounced with respect to certain classes of nonresidential building. Residential construction continued to lag behind its earlier pace, although there has been some increasing interest in two-family homes.

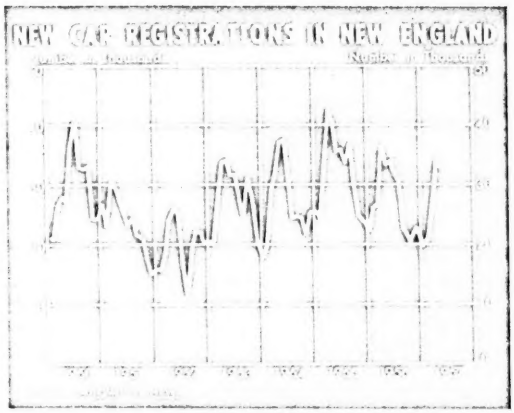
New England **agriculture** experienced diverse business conditions during the spring months of 1957. Milk producers in June enjoyed the best milk-feed ratio since the early 1950's. Farm milk prices averaged somewhat above year-ago levels, and grain prices were slightly lower. With consumption strong, the outlook is relatively favorable for the remainder of 1957.

Egg producers have had a bleak experience since early 1956. Prices were so low as to discourage replacement hatchings, but have now begun to strengthen with prospects for favorable summer and fall operation. In spite of the low income levels, egg production in New England remains at record levels. Broiler production is also at record levels, with placements in June exceeding all previous marks. Prices have strengthened somewhat from the disastrously low levels that prevailed during most of 1956 and early 1957.

Prices for the 1956 potato crop stayed at low levels throughout the marketing year. The 1957 crop now shows promise of being both large and of high quality due to favorable planting and growing weather in the principal growing area: Aroostook County, Maine.

Durable-Goods Industries

New England's **primary-** and **fabricated-metals** industries felt some easing from the recent boom demand for producers' and consumers' durable goods. Production schedules were at somewhat lower levels, and employment drifted downward during the second quarter. Customers for iron and steel, faced with declining orders for many of their products, were cautious in their buying policies. Foundry operations were generally quiet. Copper and brass operators contended



with a continuing sluggish market. Wire and cable operations have been fairly good, but orders from the automobile and appliance industries have been discouraging.

Nonelectrical machinery operations also have witnessed some cutbacks in recent months, but are still high. Machine-tool shipments have been running well above those of a year ago, but largely at the expense of whittling down the huge order backlog which was accumulated in 1956, new orders being in much smaller volume. Likewise the paper-machinery industry has been busy, but with a declining backlog of orders. A recent McGraw-Hill survey disclosed expectations by machinery producers of a recovery in order volume for most types of machinery during the final quarters of the year.

Mixed trends beset the **electrical-machinery and electronics** industry in New England. Some long established operations in heavier equipment have been in process of relocation outside the area to permit concentration upon the development and output of newer products at local plants, with consequent employment shifts. Lessened demand for radio and television sets affected operations of components producers in the early spring, but some recovery had been achieved by June. Expansion still proceeds in some of the newer fields of electronics, both for civilian products as well as for missiles and other defense items.

The transportation-equipment industry is New England's current leader in terms of employment gains from year-ago levels. Strength arises mainly from continued expansion of Connecticut's aircraft-engine plants and the backlog of orders for tankers at coastal shipyards which was created by the Suez crisis. The contribution of regional automobile-assembly plants has been minor, but may be stimulated appreciably by initial consumer interest in the forthcoming new line of Edsel cars being produced in Somerville.

Lumber production was lower during much of the second quarter as producers tried to work off large inventories which they had accumulated during the past mild winter. Although sales of all type lumber in New England were greater than last year, sales in the nation as a whole were somewhat depressed until late June. Accordingly, prices tended to be a little weak for white pine and native New England hardwoods.

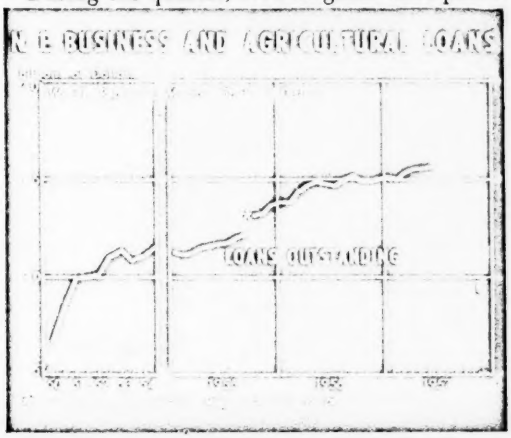
New England's **furniture** industry felt the effects of a nationwide decline in demand during the early part of the second quarter. Employment was off slightly and sales were below last year's level, although the outlook brightened as the quarter ended.

Nondurable-Goods Industries

The New England **textile** industry continued to contract both production and employment during the quarter. The number of workers in the industry in May was at the lowest level of the postwar years and was nearly 25,000 fewer than a year ago. A further reduction is anticipated as announced closings of Bates Manufacturing Company and Berkshire Hathaway, Inc., plants are completed. Short workweeks were also in effect at other mills.

All segments have felt the continuing dullness in the industry. Average daily cotton consumption of New England mills in June was 18 per cent under the June 1956 level. Some cotton and synthetic mills are prolonging their vacation shutdowns in hopes of further reducing inventories. The woolen and worsted segment of the industry has experienced sharp curtailments, with employment in the important Rhode Island segment of the industry in June 22 per cent less than a year ago. Some relief is hoped for through the higher tariff imposed on imports of woolen and worsted fabrics.

During the quarter, New England **shoe** plants experienced the usual between-season dullness with work staffs cut and short-time work prevalent. Monthly production in April exceeded year-ago levels for the first time in 1957. Producers of men's shoes were less affected by the seasonal slowdown than women's shoe producers. By early June, however, the tempo had quickened in most plants with the production of shoes for fall and winter selling. Good retail sales of shoes during the spring reduced inventories and buyers placed substantial orders for fall merchandise. The outlook for shoe manufacturers is for a better fall season than a year ago.



Apparel production experienced some seasonal curtailment during the second quarter. Employment was reduced and part-time work was general. Contrasting trends existed in different segments of the industry. Seasonal expansion in cotton-dress and sportswear shops was offset by dullness at hat and coat and suit plants. Production on fall lines got underway in many plants during June but was interrupted by widespread vacation shutdowns in early July.

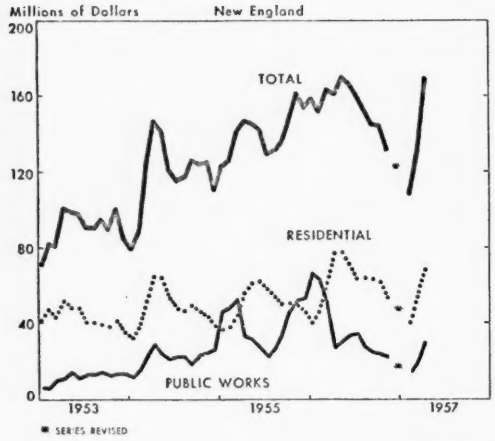
The usual seasonal slowdown in **jewelry** plant operations during the quarter was accentuated in 1957 by the poorest spring business in several years. Both hours worked and employment in April and May were under year-ago levels. Some pickup in activity took place in June as manufacturers started working on fall orders, but volume production will not get underway until after the vacation shutdowns. Retail jewelry inventories are still heavy, but manufacturers presenting newly styled lines had a good order response to early showings.

New England **rubber** products plants continued to reduce operations in April and May with employment in May eight per cent below the year-ago level. Curtailments continued at tire plants, and some manufacturers of other rubber products limited production because of slackening demands.

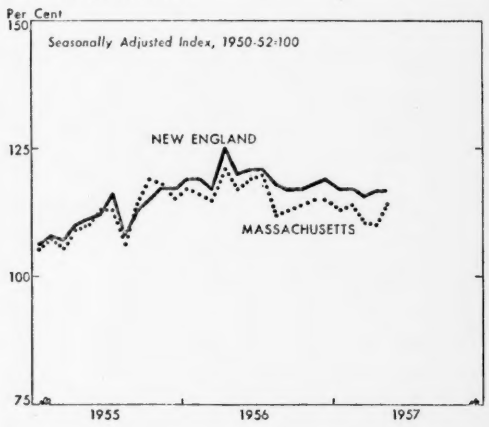
Although some segments of the varied **chemical** industry encountered declines in orders received, long-range plans for further expansion in the industry have been but little affected, and employment continues to be firm.

In the **paper** and allied products industry downward adjustments in inventory holdings at wholesale and retail levels brought decreased activity to New England mills during the second quarter. Employment was slightly below year-ago levels, sales were off four to five per cent, and order backlogs continued to decline. Except for producers of fine papers, all segments of the paper industry in the region felt this slackening in demand.

CONSTRUCTION



MANUFACTURING



MANUFACTURING INDEXES (seasonally adjusted)	MASSACHUSETTS (1950–52 = 100)			NEW ENGLAND (1950–52 = 100)			UNITED STATES (1947–49 = 100)		
		Per Cent Change from:			Per Cent Change from:			Per Cent Change from:	
	May '57	Apr. '57	May '56	May '57	Apr. '57	May '56	May '57	Apr. '57	May '56
All Manufacturing	114	+ 4	− 3	117	0	− 3	145	0	+ 1
Primary Metals	111	+ 6	− 8	104	+ 3	−13	133	− 1	− 6
Textiles	52	0	−24	69	− 1	−18	98	− 1	− 5
Leather	120	+ 9	+ 4	113	+ 3	− 1	104	− 2	+ 1
Paper	108	− 1	− 8	118	+ 2	− 9	159	+ 2	− 1

	NEW ENGLAND			UNITED STATES		
		Per Cent Change from:			Per Cent Change from:	
	May '57	Apr. '57	May '56	May '57	Apr. '57	May '56
BANKING AND CREDIT						
Commercial Loans ($ millions) (Weekly Reporting Member Banks)	1,542	+ 1	+ 5	30,933	0	+12
Deposits ($ millions) (Weekly Reporting Member Banks)	4,167	− 2	0	93,090	+ 1	+ 1
Check Payments ($ millions) (Selected Cities)	8,131	+ 3	+ 7	197,181	+ 2	+ 6
Consumer Installment Credit Outstanding (index, 1950–52 = 100)	223	+ 2	+10	215	+ 1	+10
TRADE						
Department Store Sales (index, seas. adj. 1947–49 = 100)	112	+ 5	0	124	+ 2	+ 2
Department Store Stocks (index, seas. adj. 1947–49 = 100)	127	+ 1	0	140	− 1	+ 4
EMPLOYMENT, PRICES, MAN-HOURS, & EARNINGS						
Nonagricultural Employment (thousands)	3,610	0	0	52,420	0	+ 2
Insured Unemployment (thousands) (excl. R. R. and Veterans programs)	114	− 7	+27	1,363	− 8	+ 9
Consumer Prices (index, 1947–49 = 100)	121.3 (Mass.)	+ 1	+ 5	119.6	0	+ 4
Production-Worker Man-Hours (index, 1950 = 100)	91.5	− 1	− 4	102.5	− 1	− 2
Weekly Earnings in Manufacturing ($)	73.88 (Mass.)	0	+ 3	81.78	0	+ 4
OTHER INDICATORS						
Construction Contract Awards ($ thousands, 3-mos. moving averages)						
Total	175,555	+ 4	+ 6	3,136,148	+ 2	+ 5
Residential	71,254	+ 5	− 3	1,224,324	+ 1	− 5
Public Works	48,297	+57	+59	607,650	+11	+24
Electrical Energy Production (index, seas. adj. 1947–49 = 100)*	188.3	+ 4	+ 6	228.5	+ 2	+ 6
Business Failures (number)	53	−18	−21	1,200	+ 2	+ 3
New Business Incorporations (number)	781	0	+ 1	11,986	− 1	− 9

*Figure for last week of month